

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please ADD claim 21 in accordance with the following:

1. (Previously Presented) A computer-readable medium encoded with a program that when executed causes a computer to perform a knowledge processing method with reference to a knowledge processing system formed by a hierarchical structure of source code and components relating to a designed event based on a development code name as a super class and a relationship between components as classes, comprising:

storing in a database the development code name as a super class having a name inclusively describing a component as a class of the component information, the component, and the relationship between the components;

detecting a component relating to the development code name as a super class stored in the database,;

generating a relationship between the components by an inference based on multivalued logic; and

configuring the hierarchical structure of source code and components from information stored in the database and the relationship between the components obtained by the inference.

2. (Previously Presented) The program according to claim 1, wherein the relationship between the components includes a weight which weights a relationship between components obtained by the inference based on the multivalued logic and a hierarchical structure.

3. (Previously Presented) The program according to claim 1, wherein in said generating, a new component is generated when the new component can be generated to associate components by the inference, and is associated with another component so that the new component's information can be structured.

4. (Previously Presented) The program according to claim 1, wherein in said generating, a temporal inference on a component's information structure described in a component group is

conducted and a relationship between components changing over time with described component's information taken into account, is included in the component's information structure.

5. (Previously Presented) The program according to claim 1, wherein on a part of a user who uses a component's information structure generated on a part of a designer, the component's information structure designed on the part of the designer is restructured by an inference using multivalued logic according to information about the development code name describing the hierarchical structure and a component's information group.

6. (Previously Presented) A knowledge processing method for use with an information processing system that processes source code formed by an information structure relating to a designed event based on a component and a relationship between components, comprising:

storing in a database a development code name as a super class having a name inclusively describing a component's information of the knowledge, the component's information, and the relationship between the components' information;

detecting a component relating to the development code name as a super class stored in the database,;

generating a relationship between the components by an inference based on multivalued logic; and

configuring the information structure from information stored in the database and the relationship between the components obtained by the inference.

7. (Previously Presented) The method according to claim 6, wherein the relationship between the components includes a weight which weights a relationship between components obtained by the inference based on the multivalued logic and a hierarchical components' information structure.

8. (Previously Presented) The method according to claim 6, wherein in said generating, a new component is generated when the new component can be generated to associate components by the inference, and is associated with another component so that information can be structured.

9. (Previously Presented) The method according to claim 6, wherein in said generating, a temporal inference on a knowledge structure described in a component group is conducted and a relationship between components changing during development of the source code and components, is included in the component's information structure.

10. (Previously Presented) The method according to claim 6, wherein on a part of a user who uses the components' information structure generated on a part of a designer, a components information structure designed on the part of the designer is restructured by an inference using multivalued logic according to information about a super class describing the knowledge structure and a component group.

11. (Previously Presented) A components information processing system formed by a hierarchical structure of source code and components information relating to a designed event based on a component and a relationship between components, comprising:

a storage unit storing in a database development code name as a super class having a development code name inclusively describing a component of the component information, the component, and the relationship between the components; and

an inference unit detecting a class relating to a super class stored in the database, generating a relationship between the components by an inference based on multivalued logic, and configuring a knowledge structure from information stored in the database and the relationship between the components obtained by the inference.

12. (Previously Presented) The system according to claim 11, wherein the relationship between the components includes a weight which weights a relationship between components obtained by the inference based on the multivalued logic and a hierarchical structure.

13. (Previously Presented) The system according to claim 11, wherein in the inference unit, a new component is generated when the new component can be generated to associate components by the inference, and is associated with another components so that the new component's information can be structured.

14. (Previously Presented) The system according to claim 11, wherein in the inference unit, a temporal inference on a component information structure described in a component group

is conducted and a relationship between classes changing during development of the source code, is included in the knowledge structure.

15. (Previously Presented) The system according to claim 11, wherein on a part of a user who uses the component information structure generated on a part of a designer, a component information structure designed on the part of the designer is restructured by an inference using multivalued logic according to information about the development code name as a super class describing the component information structure and a component group.

16. (Previously Presented) A knowledge processing method, comprising:
defining a super class that forms the root of a hierarchical knowledge tree;
defining a plurality of classes, where each class represents a concept derived from the super class in the hierarchical knowledge tree;
storing relationships between the classes and the super class and between classes in a database;
generating a new relationship between the classes and a new class and between the super class and the new class when the new relationship is detected by a multivalued logic inference process; and
storing the new relationship in the database.

17. (Previously Presented) The method according to claim 16, wherein storing the relationships between classes includes a weight that weighs the relationship between classes obtained by the multivalued inference process and the hierarchical knowledge tree.

18. (Previously Presented) The method according to claim 16, further comprising generating a new class when the new relationship is detected by the multivalued logic inference process.

19. (Previously Presented) The method according to claim 16, further comprising generating a new class when a temporal inference process on the hierarchical knowledge tree detects a change over time in the hierarchical knowledge tree structure that includes the change in the hierarchical knowledge tree structure.

20. (Previously Presented) The method according to claim 16, further comprising restructuring the

hierarchical knowledge tree according to a new super class defined by a user.

21. (New) A knowledge processing apparatus, comprising:

a storage unit, storing both classes and super-classes written in an object oriented programming language and storing relationships between the classes and between the classes and the super-classes; and

a micro-processing unit coupled to said storage unit and processing a method that includes,

defining a super-class in the object oriented programming language that forms a root of a class tree;

defining a plurality of derived classes in the object oriented programming language, where each derived class represents a concept derived from the super-class in the class tree;

storing relationships between the super-class and the derived classes and from each derived class to all other derived classes;

generating a new relationship between existing classes and a new class defined in the object oriented programming language and between the super-class and the new class when the new relationship is detected by a multi-valued logic inference process that applies inference based on values stored in the existing classes, the super-class and the new class; and

storing the new relationship.